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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,071	07/02/2003	Hardayal Singh Gill	HIT1P014/HSJ9-2003-0078US	6942
50535	7590	07/19/2005	EXAMINER	
ZILKA-KOTAB, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			CHEN, TIANJIE	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,071

Applicant(s)

GILL, HARDAYAL SINGH

Examiner

Tianjie Chen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 1-12, 15-25 and 27-29 is/are allowed.
6) ☒ Claim(s) 13, 14 and 26 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2005-06-20
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

Non-Final Rejection

Election/Restrictions

1. Applicant's election without traverse of Species I, claims 1-6, 9-19, and 22-29 in the reply filed on 06/20/2005 is acknowledged.

Since the generic claims 1 and 16 are found allowable, the non-elected claims 7, 8, 20, and 21 are rejoined and also allowable.

Claim Rejections - 35 USC § 112

2. Claims 13, 14, and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 13, 14, and 26 depend from claims 1 and 16, respectively, and recite: "an Hc of each of the bias layers is at least two times an Hc of hard bias layers in a structure identical to the head of claim 1 but without antiferromagnetic layers." However, the "bias layers" recited in claims 1 and 16 are only "hard bias layers." Therefore, an Hc of each of the bias layers cannot be at least two/three times of its own Hc.

One skilled in the art to which it pertains, or with which it is most nearly connected cannot make and/or use the invention.

Allowable Subject Matter

3. Claims 1-12, 15-25, and 27-29 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

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- With regard to independent claims 1 and 16, as the closest reference, Ooshima et al (2002/0024781) discloses a magnetic head, including: a sensor having a free layer, an antiparallel (AP) pinned layer structure positioned toward each of the hard bias layers, each AP pinned layer structure having at least two pinned layers having magnetic moments that are self-pinned antiparallel to each other, and an antiferromagnetic layer positioned toward each of the AP pinned layer structures, each antiferromagnetic layer stabilizing a magnetic moment of the pinned layer closest thereto; **but fails to show** hard bias layers positioned towards opposite track edges of the sensor, the bias layers stabilizing the magnetic moment of the free layer.
- Applicant asserts: the present invention provides a new sensor structure with an improved peripheral structure that achieves a higher hard bias H_c than current state of the art heads, and the hard bias layers are more stable, and can be made thinner (Specification, p. 17).

Conclusion

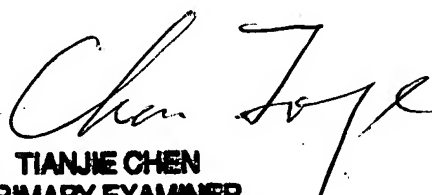
4. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TIANJIE CHEN
PRIMARY EXAMINER